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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/660,600

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Takafumi Noguchi

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EXAMINER

BOUTSIKARIS, LEONIDAS

ART UNIT

PAPER NUMBER

2872

DATE MAILED: 01/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

8/

Office Action Summary	Application No.		Applicant(s)	
	10/660,600		NOGUCHI, TAKAFUMI	
	Examiner		Art Unit	
	Leo Boutsikaris		2872	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 8-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-12 and 16-28 is/are rejected.
- 7) ☒ Claim(s) 13-15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 10-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Okumura (US 6,280,848).

Okumura discloses an anti-reflection (“AR”) film whose reflectance spectrum has minima in at least three regions, said regions including the respective three primary colors, i.e., around 460 nm (blue), around 530 nm (green), and around 620 nm (red), see Fig. 2, lines 9-13, col. 5.

Claims 1, 10, 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Austin (US 5,362,552).

Regarding claims 1, 10, Austin discloses an AR film whose reflectance spectrum has minima in at least three regions, said regions including the respective three primary colors, i.e., around 450 nm (blue), around 520 nm (green), and around 620 nm (red), see Fig. 2, lines 9-13, col. 5.

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Regarding claim 12, the AR film exhibiting the reflectance spectrum of Fig. 7 comprises 6 layers, which are different from each other in at least one of an index of refraction and film thickness (lines 30-41, col. 6).

Claims 1, 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Austin (US 5,147,125).

Regarding claim 1, Austin discloses an AR film whose reflectance spectrum has minima in at least three regions, said regions including the respective three primary colors, i.e., around 470 nm (blue), around 570 nm (green), and around 650 nm (red), see Fig. 2, lines 9-13, col. 5.

Regarding claim 12, the AR film exhibiting the reflectance spectrum of Fig. 11 comprises 6 layers, which are different from each other in at least one of an index of refraction and film thickness (lines 27-43, col. 11).

Claims 1, 10, 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Austin (US 5,508,091).

Regarding claims 1, 10-11, Austin discloses an AR film whose reflectance spectrum has minima in at least three regions, said regions including the respective three primary colors, i.e., around 450 nm (blue), around 530 nm (green), and around 610 nm (red), see Fig. 3, lines 9-13, col. 5.

Regarding claim 12, the AR film exhibiting the reflectance spectrum of Fig. 7 comprises 6 layers, which are different from each other in at least one of an index of refraction and film thickness (lines 30-41, col. 6).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-5, 16-17, 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Austin (US 5,508,091) in view of Chang (US 6,867,833).

Regarding claims 2-3, 16-17, Austin discloses all the limitations of said claims, including the limitation that the AR film is applied to a display screen (e.g., see Fig. 7) of the LCD display. However, Austin does not explicitly state that the light source of the LCD display device has emission spectrum having maxima at the three primary colors. Chang discloses an LCD display device wherein the light source (comprising three LEDs) has emission spectrum with maxima at the three primary colors (lines 16-22, col. 6, Fig. 3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a light source having maximum emission at the three prime colors for the LCD display of Austin for yielding an image which has a more neutral composite color.

Regarding claims 4-5, 19, Austin does not teach that the LCD display may be of the reflective type. Chang discloses an LCD display, which can operate in a reflective mode in addition to a transmission mode (see Abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the AR film of Austin in conjunction with a reflective display device, in order to be operable regardless of the lighting conditions present.

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Regarding claim 20, color filters may be used in conjunction with the device (lines 47-51, col. 8).

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Austin (US 5,508,091) in view of Chang (US 6,867,833) and further in view of Baba (US 6,911, 963).

Austin in view of Chang discloses all the limitations of said claim except for teaching that one or more three-band fluorescent lamps having maxima at the three primary colors are used with the LCD. Baba teaches that, among the other light sources used in conjunction with the display unit, fluorescent lamps are also used (lines 17-29, col. 18). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use fluorescent lamps in the display device of Austin in view of Chang, because of their long lifetime.

Claims 6, 8-9, 21-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Austin (US 5,508,091) in view of Furugori (US 6,836,068).

Regarding claims 6, 8-9, 22-23, 26-28, Austin discloses all the limitations of said claims, except for teaching that the AR film may be used in conjunction with an organic EL device, said device emitting light at the three primary colors. Furugori teaches that an organic EL display device may emit light in the three primary colors (lines 17-28, col. 1). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the AR film of Austin with an organic EL display device, since such devices suffer from glare problems (see lines 1-4, col. 3 in Furugori).

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Regarding claim 21, the organic EL device comprises a substrate 14, a transparent electrode 13, a light emitting layer of organic compounds 12 and a back electrode 11 laminated on the substrate (Fig. 2, lines 55-61, col. 1).

Regarding claim 24, the organic material may comprise three different layers/materials emitting in the three primary colors (line 66, col. 5 to line 4, col. 6 in Furugori).

Regarding claim 25, Austin in view of Furugori does not specify the exact wavelength emitted for each of the primary colors (with the corresponding emitting organic compound). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the claimed organic compounds in the EL device of Austin in view of Furugori, since it has been held to be within the ordinary skill of worker in the art to select a known material on the basis of its suitability for the intended use. *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945). Here, the combination of Austin and Furugori teaches an EL display device having the claimed AR film and emitting light at the three primary colors. One skilled in the art would know the appropriate organic compound that emits light in the wavelength region of each primary color.

Allowable Subject Matter

Claims 13-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 13-15 are allowable over the prior art of record for at least the reason that even though the prior art discloses AR films having minima in the three primary colors, said films

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comprising 6 layers, the prior art fails to teach or reasonably suggest an AR film comprising 6 or 7 layers with the claimed indices of refraction and thickness for each layer, as set forth by the claimed combination.

Response to Applicant's Arguments

Applicant's arguments with respect to claims 1-9 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Leo Boutsikaris whose telephone number is 571-272-2308.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Leo Boutsikaris, Ph.D., J.D.
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January 27, 2006



**LEONIDAS BOUTSIKARIS
PRIMARY EXAMINER**